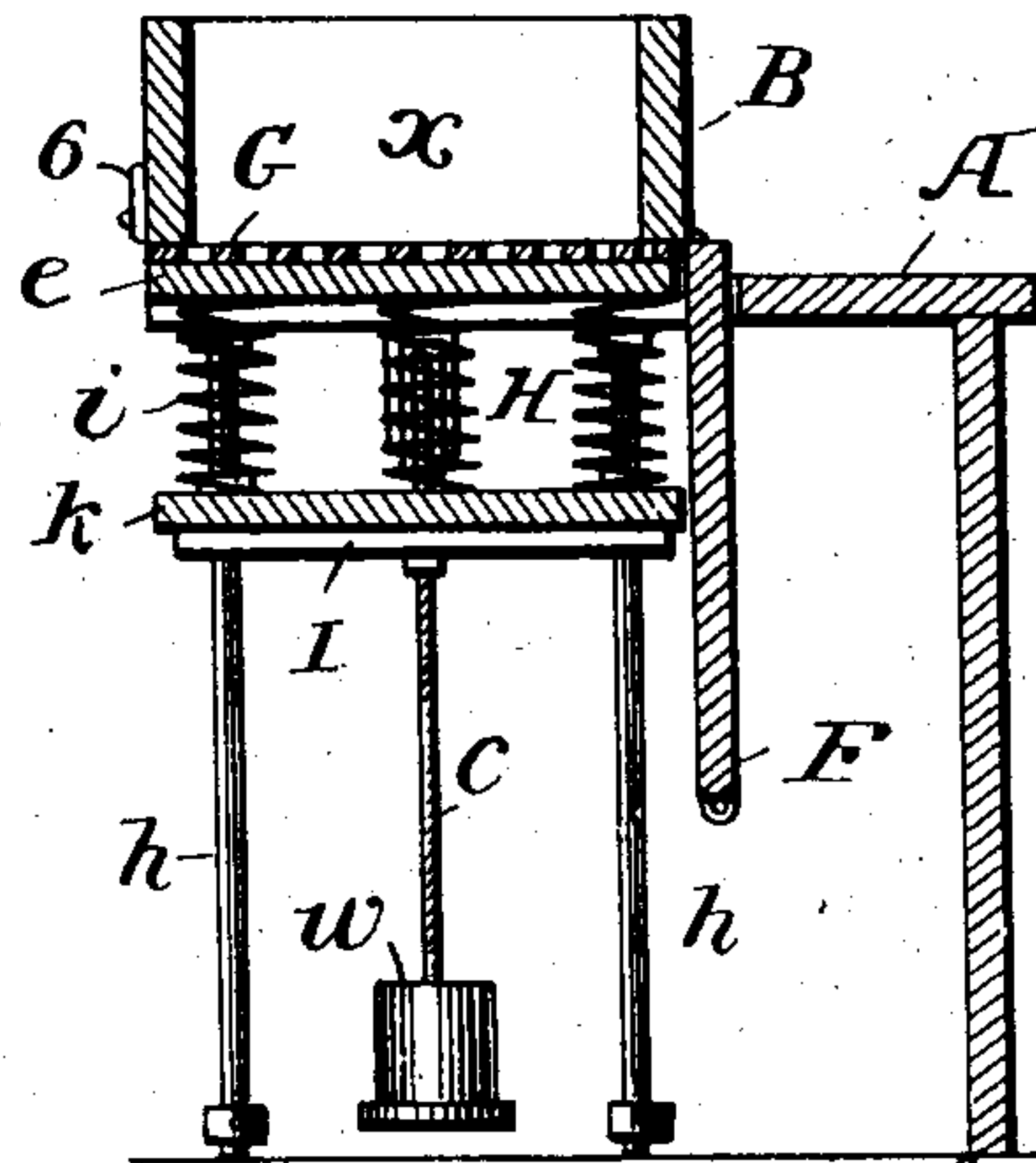
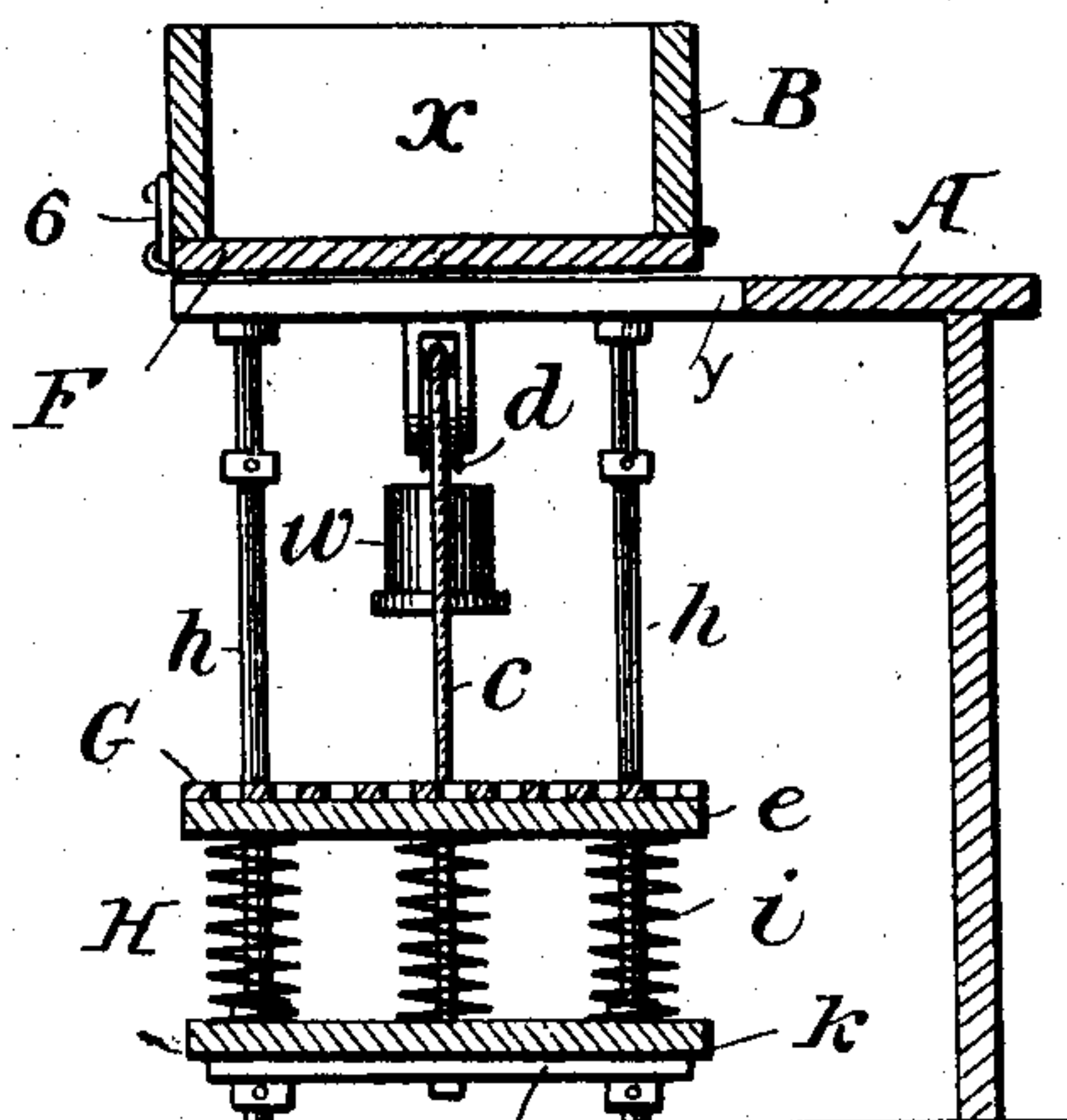
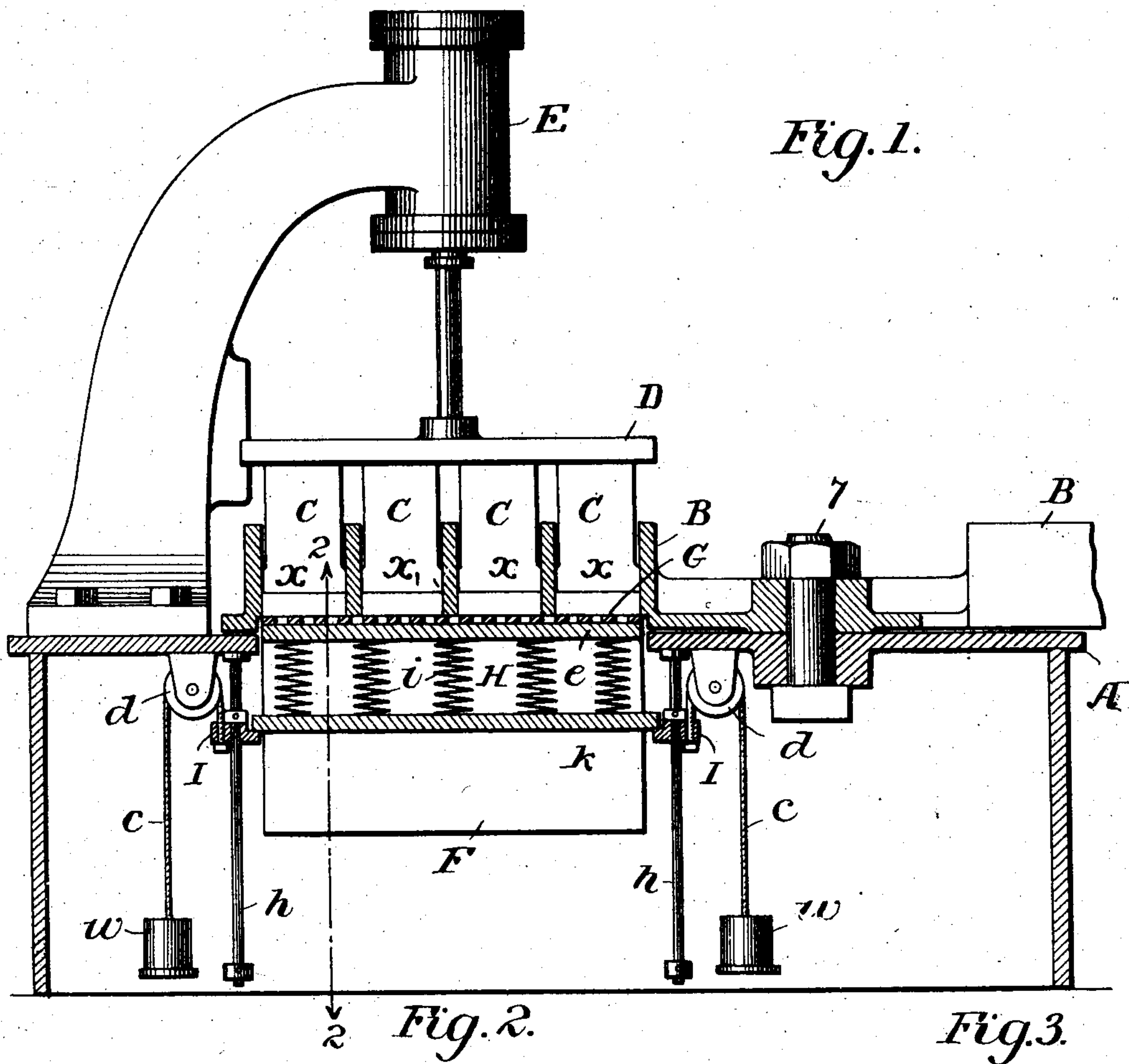


No. 834,013.

PATENTED OCT. 23, 1906.

J. D. LUTTRELL.  
BRICKMAKING MACHINE.  
APPLICATION FILED JAN. 29, 1906.

2 SHEETS—SHEET 1.



Witnesses  
*J. G. Stinckel*  
*B. C. Rust*

Inventor  
*John D. Luttrell*  
by *Arthur Freeman Watson*  
Attorneys

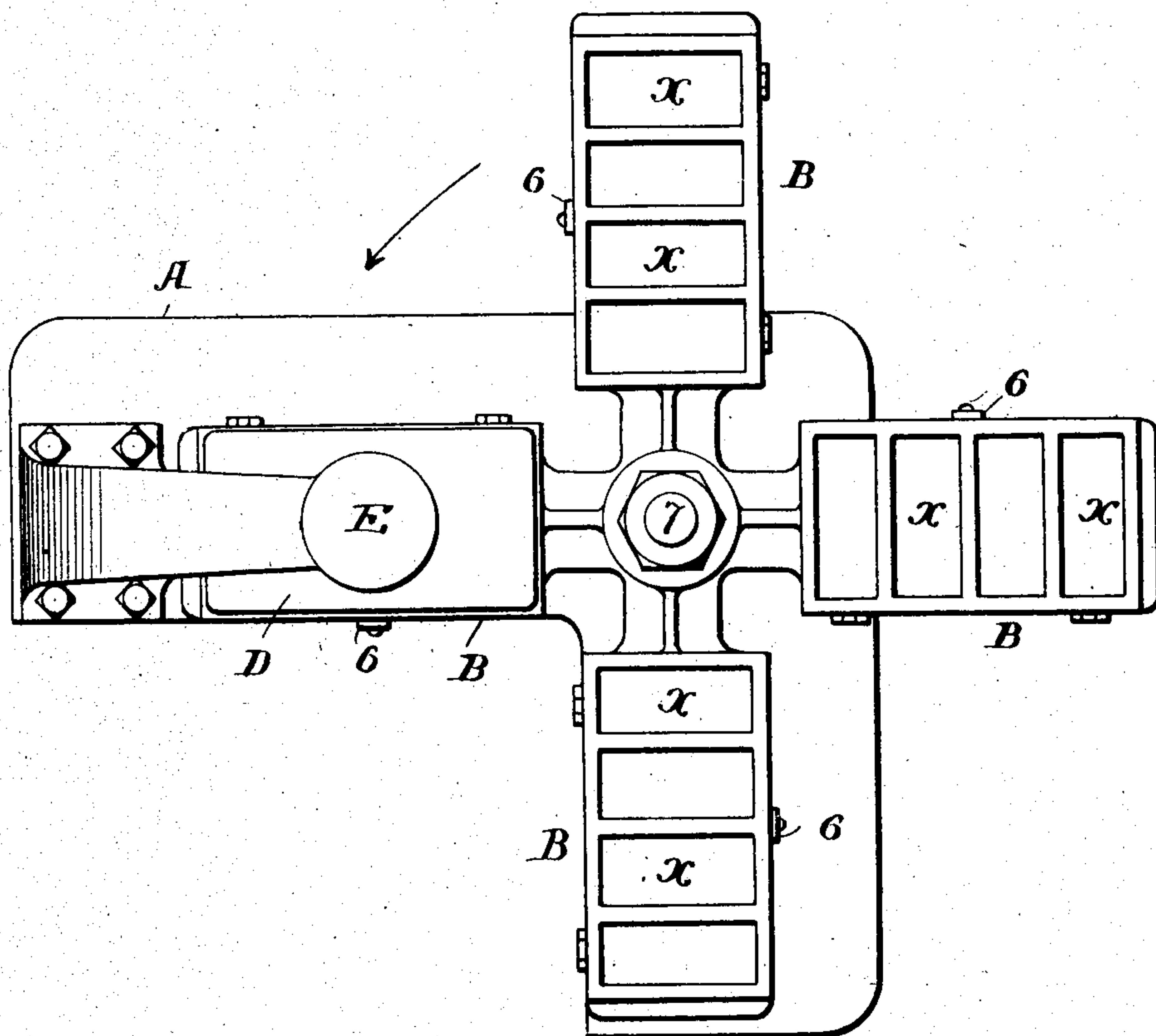
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2 SHEETS—SHEET 2.

*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

JOHN D. LUTTRELL, OF BENTON HARBOR, MICHIGAN.

## BRICKMAKING MACHINE.

No. 834,013.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed January 29, 1906. Serial No. 298,467.

*To all whom it may concern:*

Be it known that I, JOHN D. LUTTRELL, a subject of the King of England, residing at Benton Harbor, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Brickmaking Machines, of which the following is a specification.

My invention relates to brick-presses, and has for its object to facilitate the transfer of the molded forms to the pallet, to which end I construct the press as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of one form of press embodying my improvement, the same being in section through the mold and table. Fig. 2 is a sectional view on the line 2 2, Fig. 1, showing the mold-bottom closed; Fig. 3, the same, the bottom open. Fig. 4 is a plan.

The press is provided with a suitably-supported platform or table A and with a mold B, having a suitable number of chambers  $x$ , with a corresponding number of plungers C, connected with a cross-head D, reciprocated by an engine E or otherwise constructed and operated so as to carry the plungers into the chambers and in the present construction downward and to a necessary extent through the chambers and below the bottom of the mold in order that the clay after being pressed in the mold may by the movement of the plungers in the same direction be completely expelled therefrom. To secure this result, it is necessary to provide the mold with a hinged bottom F. This must be closed during the pressing operation and in this, its upward, position may be secured by a catch 6 or otherwise supported so as to resist the pressure in molding the clay. As shown, a series of four mold-boxes are symmetrically connected with a hub 7, pivoted to the table, so that the boxes may be swung in succession below the plungers C and above an opening  $y$  in the table, which extends to the front of the latter. The mold is filled with clay before being carried below the plungers, and after the clay has thus been pressed the bottom F is swung down, as shown in Fig. 1 and Fig. 3, and a pallet G is placed on a pallet-carrier H below the opening in the table. The pallet-carrier consists of a base  $k$  and a panel  $e$ , with intervening springs  $i$ , and the carrier can be passed into the opening  $x$  with

the pallet resting on the panel, the bottom F being down and the pallet below the mold, as in Figs. 1 and 2. It is desired to support the carrier and pallet yieldingly in this position, to which end I provide suitable yielding supports. One form in which such supports may be made is shown, consisting of guides I below the table, on which the frame H may rest, and these guides are arranged to slide on guide-rods  $h$  and are counterbalanced by weights  $w$ , connected with cords  $c$ , passing over guide-pulleys  $d$  and connected with the frame. The weights are just sufficient to counterbalance the weight of the frame and the bricks. After the pallet is placed below the mold the plungers are caused to descend until the pressed clay forms are expelled from the mold resting upon the pallet, which descends with the frame without the bricks being pressed to any extent, after which the pallet is carried farther downward with the frame and both are withdrawn and the pressed forms removed to the drying-floor.

In presses of ordinary construction it has been necessary to move the bricks after being pressed onto the pallets, and this removal has always been accompanied by a greater or less amount of injury, resulting in the fracture of the forms before they are dried or baked, and consequently in a considerable loss, either from injury to the forms or in impairing their quality. By the means described I am enabled to carry the forms directly out of the mold and chambers and onto the pallet without any movement of the forms upon the pallet itself and am thereby enabled to avoid the detrimental results above described. Further, by the construction and arrangement shown I am enabled to expedite the molding of the forms, as there is no time lost in the various manipulations heretofore required, and as the bricks are molded flat the edge faces are troweled and smoothed in carrying them from the mold.

A great advantage of this apparatus is that I can use a "wet mixture," as I do not have to handle the bricks after forcing them from the mold. This insures such a proportion of water in the mixture that the cement can set properly.

While I have shown the counterbalanced guides as a means of supporting the yielding frame and pallet, any suitable yielding support may be used.



It will be seen that the pallet is made of cross-strips which prevents warping and avoids the rust resulting from using metal.

Without limiting myself to the construction shown, I claim—

1. In a brick-pressing machine, the combination of a mold-box with chambers, plungers supported to move within and to the lower ends of the mold-chambers, a movable bottom for said box, and a pallet and supporting-frame therefor adapted to be supported below the mold and provided with a spring-supported panel.

2. The combination in a brick-press, of a mold with chambers, plungers adapted to said chambers, means for operating the plungers to first compress the clay in the chambers and then by a movement in the same direction force the clay from the mold, and a pallet supported to receive the bricks and to yield as the latter are expelled from the mold.

3. The combination in a brick-press, of a mold with chambers, plungers adapted to said chambers, means for operating the plungers to first compress the clay in the chambers and then by a movement in the same direction force the clay from the mold, and a pallet and a frame carrying the same supported to receive the bricks and to yield as the latter are expelled from the mold.

4. The combination in a brick-press, of a mold with chambers, plungers adapted to said chambers, means for operating the plungers to first compress the clay in the chambers and then by a movement in the same direction force the clay from the mold, and a pallet and a frame carrying the same, provided with a spring-supported panel, supported to receive the bricks and to yield as the latter are expelled from the mold.

5. The combination in a brick-press, of a platform provided with an opening  $y$ , a vertically-movable plunger, means for reciprocating the same, a mold adapted to receive

the plungers and a hinged bottom for the mold the platform having a recess adapted to permit the bottom to swing down through the same and means for holding and releasing said bottom.

6. The combination in a brick-press, of a platform, a vertically-movable plunger, means for reciprocating the same, a mold adapted to receive the plungers, and means for yieldingly supporting a pallet below the mold.

7. The combination in a brick-press, of a platform having an opening  $y$  extending to one side, a mold arranged to be carried to a position above said opening and provided with a hinged bottom, plungers and means for carrying them into the mold, and means for yieldingly supporting a pallet below said opening.

8. The combination in a brick-press, of a platform having an opening  $y$  extending to one side, a mold arranged to be carried to a position above said opening and provided with a hinged bottom, plungers and means for carrying them into the mold, guides, and means for yieldingly supporting them below the platform at each side of the opening.

9. The combination in a brick-press, of a platform having an opening  $y$  extending to one side, a mold arranged to be carried to a position above said opening and provided with a hinged bottom, plungers and means for carrying them into the mold, guides, means for yieldingly supporting them below the platform at each side of the opening, and a carrier adapted to said guides and to support a pallet.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN D. LUTTRELL.

Witnesses:

ALVAH P. CADY,  
LINA E. GEORGE.